

Sea Urchin Zone Council Meeting August 13, 2015 in Bangor, ME

DMR staff: Trisha Cheney, Maggie Hunter, Robert Russell and Troy Dow.

SUZC members: Larry Harris, Teresa Johnson, Joe Leask, Clint Richardson, Steve Eddy, Duane Carver, Jason Leighton and Dean Norris.

SUZC members not present: Jeff Edwards, Tracey Sawtelle, Mark Nickerson, Atchan Tamaki, and Chuon Muth.

Public: Kim Ovitz and Paul Cox.

Sea Urchin Zone Council Research Subcommittee Meeting

Meeting commenced at 3:30pm

Cat Ledges Pilot Project Update

L. Harris: We met up with Clint, Mark and Skip on July 23 in Bath and got a scenic tour of the ledges (Appendix A). It was a good day for diving. Only issue was finding the panels, which we found all but one. Some of the sets had flipped over because it was an active area, so those are useless, so we collected the AstroTurf and trays from them to reuse and deploy next year. We got fifteen settlement collector panels. We bagged every one and added alcohol and preserved them (Appendix B). I have managed to go through four of them. We also had the day glow ribbon to identify the sites with and chose three sites. We put them down and attached ribbon on them so we can find them again. I went through four samples that we collected from the site; only one had an urchin in it. These were the good panels. For every place that I put out the panels, when I go to retrieve them we cut them off the wire frame, turn them over and often one or two one year old urchins are underneath them where they can hide. In Eastport (another study site) there were some that are really big; one of the racks were covered. The one or two year olds that are in the system like being under things and crawl up under the panels.

T. Cheney: Did you record the Lat/Lons for the sites?

C. Richardson: I marked them on the plotted and have GPS location information for the sites.

L. Harris: We have the bricks in clusters on the bottom and they are brightly colored with poly pro rope that will float up with plastic ribbons so it is easy to identify the location again.

S. Eddy: So, your initial assessment is settlement is poor?

L. Harris: The initial assessment is that without disturbance it is going to be a somewhat hostile place for little urchins. An observation I made many years ago in the early stages when I was doing recruitment panel studies was that we used to preserve ten of the fifteen panels and the other five would go in a magnesium chloride solution that would just knock the urchins out, and they would let go of the panels and you put them back in sea water and then you have those for experiments as they stay alive. A few years ago I set the whole panels aside not sorted on a Friday after getting back from a long day in the field and came back on Monday and there were not many little urchins left but there were a lot of big, fat amphipods. The big ones are quite capable of eating lots of urchins. So, when I went through the panels from Cat Ledges, there were lots of amphipods.

S. Eddy: And lots of kelp means lots of predators, crabs.

L. Harris: There are also a lot of worms, scale worms, which are also predatory. Then amphipods, some shrimp, this particular sample has two sea snails which is a small fish with a sucker on the belly and I am not sure what role they play as a predator to urchins. Very few mussels, some little sea stars that had settled on the panels. Why the sea stars survived and not the urchins, I am not sure.

J. Leask: What about other panels elsewhere that you looked at?

L. Harris: I picked up the Isle of Sholas panels last week. I just picked up the Eastport and Winter Harbor ones on Sunday and Tuesday. I am going to get the Nubble ones next week. They all get solution right away so you can work on them later. I haven't had a chance to look at them yet. I am particularly interested in the Isle of Shoals vs Eastport comparison, as Eastport is historically really low numbers, and the same at Winter Harbor, but Isle of Shoals last year was really good – there was an uptick, along with Nubble. There is an urchin barrens forming in Gosport Harbor with one, two year old animals and all the ledges are turning pink as algae is being removed.

J. Leask: What about forming a conservation closure there as one diver could wipe them out? You have a two year window before they would be harvestable size.

C. Richardson: They may not even survive.

L. Harris: We are getting into the season where the crabs come on. There were a couple of years back where they were heavy urchins on a reef with one year old urchins forming a barren, forming a front. It was during a period when Jonah crabs are very popular. They would build up and then the crabs would wipe them out, then fleshy algae would come back, harboring crabs and we never saw them again. This is the year at Isle of Shoals that we would see that recruitment.

J. Leask: We have this opportunity, if we had a lot of agreement, we could take that site and monitor it, and possibly shut that site down as a conservation area. Two year olds there, but previously crabs predate them.

L. Harris: Not nearly as many crabs this time around.

J. Leask: That and it has been a pretty cool water year, so it may not knock the urchins back.

L. Harris: I don't know that harvesters would dive that area. It is on the Maine side, Gosport Harbor has the state line right through the middle of it.

J. Leask: Does NH have commercial urchin divers?

L. Harris: Not that I know of. I have heard of some lobstermen having them in traps.

J. Leask: Bill Sutter used to tell of people dragging for urchins in deeper water around Provincetown. Would be interesting to see where the spawn is coming from, consistently, over the years. Possibly they are a self-sustaining biomass.

L. Harris: It's the baby crabs that get the bad wrap, but I think amphipods are more of an issue for recruitment. And when an urchin hits the bottom when it first settles it is really a blob, very edible, before it grows out its spines. It is only a couple of days before the spines start to form, but we really don't know how long it takes until they are encased in armor. They grow at different rates, even in containers with food. If you have a whole bunch of them together so they are somewhat crowded, you will get those "jack rabbits" that grow fast, but if you take those out, there will be new "jack rabbits". So there is a behavioral component.

J. Leask: Historically when there have been urchins, there seems to be a group that are feeding, and a group that don't do anything.

L. Harris: A fellow that I work with in NH that used to harvest urchins quit when it was impossible to rotate extraction. You would go along and harvest the feedline and move on, but then the yahoos would come along and scrape away the barren.

D. Norris: The downfall was in 1992 when people started to straight rake when they started to pay for junk urchins. Combination of tote limit and culling on bottom is the end of the volume guys. I think they are happy now with high pay and high quality, and see that it works.

R. Russell: Some guys would be mad when they brought up 10 totes of urchins, but after being culled there were only 5 left.

D. Norris: Some guys won't figure it out.

L. Harris: So, it will be in late October or early November that we do the transplant.

C. Richardson: Yes, but it will be weather dependent. Next week we are going to scout out some sites to transplant from.

J. Leask: I am worried about the suitability of the site due to the amphipods.

S. Eddy: That is why we are transplanting the large ones to clear it out.

L. Harris: You will mostly be transplanting larger sized urchins, but even a thumbnail won't be susceptible to grazing by the amphipods.

S. Eddy: The hatchery seed will be big enough too.

L. Harris: The rate of predation will go way down at that size.

D. Norris: The smallest ones will double, triple in size, but it is the bigger ones that will provide the protection.

J. Leask: Are you documenting the predators?

L. Harris: I document everything.

J. Leask: We are trying to establish a colony here that is sustaining themselves.

L. Harris: It was striking as to how many amphipods there.

S. Eddy: This is a good site, even with the micro predators.

L. Harris: I will have all the different sites and I can set aside X number of samples and can look at the densities to compare.

S. Eddy: Everything Larry says makes this site even better.

L. Harris: Next year there will be three sets of three trays and it will be easier to find the sites as well as they will be established. Because that area is pretty hydrographically active, wedging them into a depression or a narrow area so panels stay upright or we can even stick another brick on there so they stay upright.

S. Eddy: In addition to repopulating with seed, we are looking at two nursery methods – land based nursery and out at an aquaculture site. We are also looking at the effect of having the adult transplants, so will have them and some wont. I am going to test out the nursery cages, it doesn't have urchins in it yet, but it is out there. It is one inch mesh and I am going to put some good sized urchins out. It will give us an indication of what we may or may not change for the nursery cages.

J. Leask: Where is seed coming from?

S. Eddy: It will all be seed from CCAR and some will stay there and others will be reared at sea near the out plant location. Want to see if they do better than tank reared and they will be marked with two different fluorescent dyes, either red or green.

J. Leask: Having more micro predators makes it better?

S. Eddy: The point is that we have an inhospitable site. Concept is that by transplanting adults they will thin it out, and we will see the thinned out predators. It will evaluate that hypothesis of the habitat being flipped and locked to see if you can reverse that.

J. Leask: We have never really encountered micro predators in our years of transplanting. But we have had bigger predators.

D. Norris: There used to be good bottom, and then there is bottom with all the red dust on the bottom that I would never put urchins on, I just know it is wrong.

- J. Leask: I just don't want to run into what we have done in the past with reseeded. We have not moved any this distance and not in this area of the state.
- S. Eddy: You also have the experience of what not to do with the Amanda Leland project.
- J. Leask: I just don't want this to be the three strikes were out. Want to make sure it works.
- L. Harris: One of the things that we have not seen at this site is any baby crabs.
- D. Norris: Are we seeing baby blue mussels?
- L. Harris: Not really.
- R. Russell: We have not seen those blue mussel mats in the shallows for some time now, haven't seen those dense mats in the survey, no spat mats for a while.
- L. Harris: I have a panel experiment at the mouth of Portsmouth Harbor that I have had for decades and this is the third time I have run it. A long term community success type of experiment. In recent years I haven't had to clear the lines of baby mussels, maybe for five years. This past year I had to spend a whole dive clearing the lines of the mussels.
- D. Norris: Urchins can eat the baby mussels, their shells are thin enough.
- J. Leask: Any reports from mussel farmers that they are having a hard time getting seed?
- L. Harris: They are getting them offshore. Historically if moving the clumps of mussels from the inshore lines, they would be back within year or so. When they put in the big float at the coastal lab, the mussels didn't recruit and take over the sides of the float until a few years ago. Now they have built up. At some of the marinas could you see on the floats open patches where they wouldn't even recruit.
- J. Leask: I haven't had to clean off my floats in Portland for the last two years. Usually I would have to take out the floats to clean them off. Urchins in the heyday when there were barrens and barrens you would look for the pin mussels as that was where the best urchins were. It would be good to tie that cycle into the urchin cycle.
- L. Harris: I was in West Quoddy head on Monday and I don't think I saw a blue mussel at all and they used to be there.
- J. Leask: We used to see them in Penobscot Bay and then the mussel draggers came through and cleaned the beds out completely. I haven't seen the blue mussels in a long time, there used to be purple mussels.
- D. Norris: Rockport and Camden used to have some nice mussel beds.
- C. Richardson: Yes, but probably not enough for harvesting. We only dove a couple of times there last year.
- T. Cheney: So Larry, you would say that the field work went well? Your graduate students worked well with commercial guys?
- L. Harris: Yes. I brought Seth who dove with me and Megan had an ROV with 100 meter cable on it to document the site.
- S. Eddy: I thought the plan was to do the GoPro sweep of the area before transplanting?
- R. Russell: We have some nice smaller ROVs that are used for documenting the deeper aquaculture sites.
- J. Leask: You used to use a camera.
- R. Russell: It was time consuming and didn't get a lot of good deep-water populations, so it wasn't worth it especially in southern Maine where there are not a lot of population over 150 feet.

C. Richardson: The ROV Megan brought had the live feed and with all the kelp there she couldn't do a lot. Motorized and controlled with through her iPad. Running it was ok in the current though.

L. Harris: That population of kelp will go reproductive and disappear and come October it will be a lot easier to work there.

R. Russell: The aquaculture one can handle currents and it has an arm. We may be able to sweet talk Jon Lewis to help out if they are all caught up with their field work at that time.

J. Leask: The amount of distance you can cover with an ROV would be very valuable. But you don't use a camera?

R. Russell: Our survey is solely dive based.

M. Hunter: We used it for four years.

R. Russell: It took a lot of time post sampling to look at the photos and to do the documentation.

D. Norris: With the drop cameras it is hard to see urchins, really bad resolution. We used them in Alaska for geoducks. You really can tell if it is good habitat to dive on though. The Go Pros on the helmets work really well. They are fun to have.

L. Harris: It could be interesting to have the ROV run at the three different sites. Could get an overview of the sites and what they look like and do that over time.

J. Leask: Late winter, depending on water quality, you can see down 20 feet.

T. Cheney: You could use it as a way to characterize the habitat over time more so than evaluating the urchins.

D. Norris: It would be really good to evaluate the habitat first before diving and also for going really deep.

S. Eddy: Should the proposal get funded, I budgeted \$2200 for a GoPro.

J. Leask: We can use mine, but we may want a couple of them.

L. Harris: Mine has a whole lighting set up and waterproof housing. Advantage of lights are that it give you color so you can distinguish different species of algae or urchins may show up better. Even when it's murky, it does add a bit.

S. Eddy: So it would be a good piece of equipment to have?

D. Norris: Having it equipped with the side lights helps with the back scatter so you are not looking right through it all. Better clarity.

L. Harris: Before the next deployment we need to really rehearse. We are talking about deploying three separate sites. Tow boats, two teams. We have three boats right now and three divers. I will have Seth Goodnight and Sarah Edquist with me as the divers.

T. Cheney: I will put them on the special license.

L. Harris: We are only going to support the commercial guys that are doing it all.

S. Eddy: What is status of my Special License?

T. Cheney: DMR Advisory Council approved it on July 30. I'll ask Deirdre about it on Monday.

Sea Urchin Zone Council Meeting

Meeting commenced at 4:45pm

Approval of Meeting Minutes ([June 18, 2015](#))

Approval of June minutes – could not vote because did not have a quorum at that time. Duane and Jason arrived later in the meeting and minutes were approved then; see below.

DMR Updates: Swipe Card Implementation

T. Cheney: Programmatic delays are forcing us to postpone the roll-out of the sea urchin swipe card program until at least October 1st. We anticipate we will have a finished product by the end of August and will start setting up dealers mid-September and working with them one on one at a time that is convenient to them. They will need to bring their computer, laptop or tablet with them to have the software program installed and we will be providing all dealers with either a MAC/Apple based swipe card reader or PC/Android based reader free of charge. We will be sending out notices once we are ready to set dealers up and harvesters will receive their swipe cards in the mail in mid-September. This will mean that Zone 1 Early Divers will not be participating in the program this year; however, they will still receive their swipe cards in the mail as these will be good from year to year.

D. Norris: What is companies' reform mid-season?

T. Cheney: Historically they have done that and will be able to continue to do so. When they purchase their new license, at that time we will ensure that they get trained if they haven't already. Robbie is committed to helping everyone out to ensure they are all set and know how it works.

T. Johnson: What about the roe content; will we be able to record that for this year?

T. Cheney: Yes. I did want to let the council know is that Robbie took the feedback you provided to him at the last meeting and reached back out to ACCSP about collecting the roe information as I know all the council and Maggie really wanted this to be recorded.

M. Hunter: I worked with Robbie. He was successful in negotiating the ability to collect this information for this coming year. So, roe will be collected under one of six different market grades which are: <8%, 8-9%, 10-11%, 12-13%, 14-15% and >15% roe content.

T. Cheney: Now, roe content will be reported at the point of sale and not by a bookkeeper back at the office, thus giving us better confidence in the numbers being reported accurately.

J. Leask: What about getting rid of the harvester paper reports?

M. Hunter: We still need the effort information from the harvesters. It was very useful for evaluating Cat Ledges project as we could look back in logbooks to see who was fishing there and we really hadn't seen anyone fishing there for a few years. Also, it was helpful in evaluating the Searsport dredge project and where the spoils would be dumped. There are not a lot of urchins there as it is mostly mud. Further down the bay there are some urchins.

J. Leask: What about contaminants? Has anyone ever tested at state level?

M. Hunter: No.

D. Norris: I don't think it will be there. We tested urchins in the Tadoussac (Quebec) near an aluminum smelting plant and there wasn't any level in urchins. They feed so low on the food chain and don't bioaccumulate heavy metals.

DMR Updates: Urchin Import/Export Issues Update

S. Eddy: US Fish & Wildlife has really pushed back on the letter I submitted. The lawyer got a letter and they are going to continue the policy as they will continue enforcing at the current levels, citing endangered sea cucumbers being smuggled into the country.

DMR Updates: Chapter 26 Rulemakings

T. Cheney: The DMR Advisory Council approved the final Chapter 26 season rulemaking on July 31 (Appendix C). Changes to the final regulation included authorizing the use of paper reports in case of a failure in the swipe card systems and providing all dealers with a swipe card reader free of charge, regardless of what type of operating system they use. We will also be running a subsequent rulemaking at the same time as the scallop regulation this fall for the closure of the Cat Ledges Area to facilitate the pilot restoration project.

DMR Updates: Assessment Report

M. Hunter: I am working on a data report that includes information collected from the port sampling, dealer report, harvester reports, Roberts's survey, and the ME-NH Inshore trawl survey. I looked at all those data sets that had information on urchins in them. It goes through the 013-14 fishing season. Also I am working on a history of the fishery, the description of the fishery which will be in a second report. There will be a data report and then a synopsis paper. I got looking into the early history of the fishery.

J. Leask: Did you consult Ted [Creaser]?

M. Hunter: Not yet. I am trying to figure out who is claiming to have started the fishery. It really started in all these areas around the same time. I started with 1929 with a New York paper on some urchins that came through the Fulton Fish market on urchins that came from Maine. I interviewed my father-in-law who raked in in 1949 and then there was a paper in 1961 reviewing the urchins from Maine trucked south. Then I got into the Native Americans and shell middens that had urchin tests in them. Not tremendously abundant, because a lot of predatory fish around then, but there is evidence going back to 4000 year ago. In the 1970's there were a few people that had a market in France like Paul Glaze and John Stotz. Then when the YEN became strong it was feasible to ship to Japan. Joan Amery in 1994 wrote a great description with George Parr, Paul Glaze, Atchan and early divers, so a great historical article. Basically it will be a background on how we got to here and I want to talk a lot about Teresa's work on how we should be managing.

J. Leask: That is a good segway to FMP (Fishery Management Plan) discussion. Maggie I think that is awesome.

M. Hunter: The data report will be on the [web](#) tomorrow. It is a scientist point of view of how we contributed and how Ted and I took a wrong turn when we focused on the industries catch rates that were maintained and masked the depletion.

Discussion: Fishery Management Plan Discussion

J. Leask: I would be interested to get your point of view on that. I honestly thought it is the better harvesters who are still going, I think we are in a good place when you look at the other countries and places that have crashed their fisheries. Ireland is collapsed. California is starting to hold on now, but whether they took anything from us I don't know. For the future down the road, for our kids, the FMP is the tool for us to do that. There have been a lot of people, Ted, Killer, Bill, who put a lot of time in at these meetings over the years. We managed to eke out a 10 days for Zone 1, and it can sustain itself and I think we are seeing a slight recovery in Zone 1. Larry is seeing down to the southern part of the state better amounts of urchins. So there are some definite pluses. Anyone have anything specific for that the FMP should address?

C. Richardson: What do you need?

T.Cheney: Can I just say that I have updated the document to incorporate edits in the History and Description of the Fishery and Management sections and also added Table of Contents, List of Figures/Tables, Acronyms and a Reference List. The most recent version is dated August 2015 and I have brought them as a hand out. While this has been on the back burner for a while, I would like to bring this back to the forefront so we can continue to develop the document. We really need to work on the recommendations sections.

D. Norris: Did Bill [Sutter] get this?

T. Cheney: Not this version; I just did that work on it this week.

D. Norris: Can we make sure he gets this as he has put a lot of work into this document and should be involved in seeing it through.

T. Cheney: Yes. I can include Bill and Brian [Preney] in my next mailing to the council so they both get the most recent versions.
J. Leask: this document is going to guide how we move forward. We really do need to have Bill come in and help with this as we don't want this document to constrain our fishery.

[Jason Leighton arrived]

Now we have a quorum, we can approve the minutes.

Approval of the June 18 meeting minutes: Unanimous.

[J Leask brought Jason and Paul Cox up to speed. Back to discussing FMP.]

T. Cheney: Reviewed all the recommendations on Page 16 of the August 2015 FMP:

1. MANAGEMENT RECOMMENDATIONS

There are a number of issues to be resolved or discussed that relate to managing the fishery over the long term. Among the questions remaining to be discussed are the following:

1. How do we promote growth of the resource while maintaining the viability of the fishery? **(Is it possible to allow creative initiatives by harvesters and also insuring that the effort will be adequately evaluated and benefit the initiators?)**
2. How many zones should there be? **(Would increasing the number of zones allow for more accurate assessment of stocks and assigning of fishing effort?)**
3. Should there be local control of the resource? **(Would increasing the number of zones allow for a more workable allocation of control to local harvester organizations/groups?)**
4. Are the licensing criteria appropriate and how do we promote turnover and when? **(Should there be a time limit on latent licenses and do we address the issue of transferable licenses within families?)**
5. How do we promote creative approaches to manipulating populations to promote reestablishment of once productive sea urchin populations? **(Also see #1.)**
6. What roles can aquaculture play in a sustainable fishery in Maine? **(Stock enhancement? Supplementing the production from wild fisheries for a more sustainable overall production in Maine?)**
7. How do we increase safety in the fishery relative to fishing effort and scheduling of days?
8. Other? **(Would establishment of a List Serve be beneficial to promote communications? Also, is there a way to increase the role of rule making rather than legislative statute in management of the urchin fishery?)**

J. Leask: We really should go through it line by line and throw a few ideas out there. Let's start with number one: "How do we promote growth of the resource while maintaining the viability of the fishery? "

D. Norris: I think tote limits and culling on bottom are addressing that. Also attrition in the resource, with guys dropping out there are less guys going so less effort in the resource.

J. Leask: Goal should be to increase the biomass to actually create new jobs.

D. Norris: Number one is related to number three. Number three is very controversial. A lot of folks like to chase the quality down the coast and if they are locked in to one place you will hammer the resource. But in a sense there is local control of resources. For example the Cat Ledges project is a lot of local control, local participation. If we have projects it is mostly going to involve local people that it is easiest for them. So, in a sense, some of number three can be wrapped into number one. There should be some local control, but it needs to be reverted back to the open fishery.

T. Cheney: These management recommendations were developed several years ago prior to Mick Devin's bill in the legislature, and the council hasn't addressed them since, so they do require some updating as some of the items the council has been addressing already.

J. Leask: I would like to have everyone to be able to put in their two cents on all of these items and see if there is anything else that they would like to add on. How about we go around the room, and each person speaks to an idea or adds any new ideas. Most of these are tied together.

D. Norris: At the time that we came up with these, it was acknowledged that some were duplicates.

J. Leask: My eyes are towards the future to increase biomass and give kids a shot to do it. My concern is that the guys who have put the time in over the years should have a greater say in that. Clint or myself discussing say license transfers. I am pretty sure this is going to be the group that deals with that. What are we going to do with the licenses? Those are the two biggest things.

D. Norris: If we are able to transfer licenses, then we need to be able to ensure that no one gets killed. In the past, it was the new people that hurt. It should be the tenders who get a chance at the lottery.

C. Richardson: You have a mechanism for that as you need a dive certificate to get your licenses. Back when there were all the mortalities, any shmuck could get the license.

D. Norris: Time on bottom too.

C. Richardson: To be certified you need to have time on bottom.

D. Norris: If there is something new, then they really should have spent some time on the boat.

J. Leask: So you are really saying that an apprenticeship would teach them the safety and how to harvest.

S. Eddy: Also how show them the code of good practices.

T. Cheney: Scallop Advisory Council supports apprenticeship as well.

D. Norris: As soon as entry was closed, the mortality stopped.

M. Hunter: There were those two guys that died in 1994 on their first day.

S. Eddy: Lost some draggers in Cobscook Bay in the reversing fall too.

J. Leask: Safety needs to be important.

T. Cheney: That ties into number seven.

D. Norris: There is nothing that can be taught or regulated about it.

D. Carver: I am not in favor of the idea of transferring licenses; we have battled this out in lobster. I am supportive of the Commissioner as there will be a bidding war and the licenses will go to highest bidder. Look at what happened to the quahog industry. We just ran a safety program in Lubec on the coast guard base on the use of safety equipment as we are going to have to do it. Simple things like you jump out of your boat into a raft with a flare in your hand, it is hard. Also, your rope is only so deep and if you can't find a knife and you're in the water and get pulled down. Use of flares, it was good. I was skeptical, but I got enough out of it to make it worthwhile. I now know how to use the fire extinguisher, you gotta shake it.

J. Leask: Is it safe to say that old guys could benefit from the training course?

D. Carver: There are a lot of young guys now fishing 25 miles offshore, impossible to get to them if they get in a mess. They have the lifesaving equipment; you gotta know how to use it. You talk about local control. We did this with clam industry. It stopped the production of clams; the more you dig these clams over, the faster the clams grow. We thought it would be the same for quahogs and mussels. When you wash them out it spread the seed and the clams are the same way. When they shut down the coves because of the local control, their production dropped. Gotta open it up and start digging because they need to produce.

J. Leask: Stevie Sharp fought hard to open up the Bagaduce, then the following year the green crabs got them. Timing of when to open. There are places that urchins have come back thick in areas, and in late March you can work the edge of the low water mark and those urchins will be 8-12% at best, but if you beat it back you can start the process all over with the conveyor belt.

D. Carver: In the lobster industry this year the catch hasn't been that high, the lobsters just are not moving even now after the shed. Tons of angel hair on the lines. These lobsters have all the feed they want to me and the sea urchins too. We have one area called the Egg Rock, notorious for eggs. The fellahs went down there every year to harvest them. The eggs would come in from the deep water onto the kelp and eat it for a year, then they would harvest them the next year and they would be ok. One year the draggers got in there before they got to the kelp one spring and they were not good urchins. They broke that chain and it has taken 20 years for them to come back finally.

J. Leask: Was it in an area that was closed to scallop dragging [[Rotational Closure](#)]?

D. Carver: Yes it was.

J. Leask: I have heard from guys in Bold Coast who have said that the urchins are coming back down there where there was not dragging for two years for scallops. We should be managing both fisheries together because they have an impact on one another.

D. Carver: Also, the factory ships that are stripping and not throwing anything back. When we gillnetted we would throw the guts back and that would feed everything. This year we had a run of Canadian lobsters that came down. Even your lobster shells that are processed, the shells should go back into the oceans.

J. Leask: In respect to the FMP, I know you mentioned safety, throwing stuff back, so almost ecosystem based management in a way.

D. Carver: We need to find out what these species are eating.

J. Leask: When urchins spawn they are all bunch up, which is water temperature driven in the spring. The beds of urchins that I see left are garbage urchins. I was convinced that some portion of the spawn was constrained by the seaweed. I have seen urchins in the wild reproduce well with certain conditions. Mark has mentioned conservation work for harvesters.

D. Carver: There was a place down in Cobscook Bay this past year they were getting \$6-7/lbs. for good roe count.

D. Norris: Some times in the early season a big storm will rip off all the kelp and dump it in the coves and then the urchins are really good, good roe. Up really tight where there are a lot of urchins you find some of them that skip the spawn.

J. Leask: I found that in late May and early June that they were full of spawn. Teresa do you have any input?

T. Johnson: A lot of the things that we talk about are really fine scale, feeding, etc. Paying attention to those fine scale intersections. Paying attention to that closed area work that you are doing, tied to conservation. Creating conservation incentives that could be tied in. Those opportunities are important. So managing the kelp-urchin interactions are really important. Also for the FMP including a list of "tools" for management options would be good to have in the document.

D. Carver: Brian Beal would increase water temp 10C and they would spawn. Sometimes he would drop it and they would spawn. Unbelievable! When you think of these rivers where the temperatures are really high, and cold water coming over the flats, they should be spawning constantly. Even the safety side, Cobscook Bay with the 25 foot fall in tide, 12 feet in Jonesport, and less further west. Some of the guys I take them down to Bucks Harbor to around Libby Island and when the tide is just right they will do cartwheels. That is what caused the casualties last week with those canoeists, the tide coming in against the wind and the chop. They canoed to Roque Island to dig clams and we assume they got into trouble on their way back. Horrible thing. Stuff like this happens, and they had been doing it for years. I came up in there dragging scallops and it was completely calm and came out of there and it was 6-7 foot seas, same as coming out of Cutler.

C. Richardson: I just think that there are all kinds of different stuff in the FMP, but if you are going to take and do the licenses then you gotta get the data on the landings and days. In every other industry, it is always the way it goes. It is all dealt with production. If you are ever going to transfer, it has to be taken into the consideration. I think it also should be one guy one license, can't stack them.

D. Carver: Seven totes for the guys that are experienced. For lobster fishing, the first year you have 200 tags and it takes five years to work up to 800 traps.

T. Dow: They start with 300 and get 100 a year, so it takes 3 years.

D. Carver: I have heard guys who just want to go out for one tote of urchins.

J. Leask: Graduated apprenticeship maybe.

C. Richardson: It has been three years and nothing has happened.

D. Norris: Until the numbers start coming up in the survey, we can't let people in.

J. Leask: Also we have to deal with the latent licenses.

D. Norris: Things are going to change if we start to see the number ticking up, then we got to get serious about how to let people back in. Until we get that under control, then we want the number to go down.

C. Richardson: As far as latent licenses go, like the groundfish industry, you put them on a list and when the fishery comes back they can come back into the fishery.

S. Eddy: How many years do you get listed? What about Dean who had back injury?

J. Leask: He would still get his license. I don't like the groundfish example. Guys that have stacked permits have survived at the expense of others. In urchins, it should be one guy one license. If you tend you can go both seasons. If transferable, what if it became a bidding war?

S. Eddy: Do you want to take the profit mode out of it?

J. Leask: No one will ever be happy. What do you think Paul?

P. Cox: I am for it; I would like to transfer it to someone. We are getting old and something needs to happen. Somewhere our licenses need to go to somebody.

C. Richardson: What about mortalities?

P. Cox: We are more careless now than we were.

J. Leask: In respect to stuff you worked on for a while, do you have anything you want to add?

P. Cox: The local area thing, local control. I am not for it, but using Cobscook as an example, there is some amazing things you could do, but we won't because we are doing it for everyone else's benefit. The closure was a failure as it went to long. But I think near Goose Island you could put some urchins in and bring them back. I think the closures brought a lot of latent license back.

D. Norris: Goose Island one of the best quality spots in the state.

P. Cox: For eggs to be gone to coming back and eating everything out. Who would section it off if no one else is sectioning off other places?

J. Leask: It is a whole different animal up there.

P. Cox: If it was done right, and you closed sections, move urchins around, I think you could land what the entire state lands just from there.

S. Eddy: It gets back to the Zone question; should that be its own Zone?

J. Leask: Maggie, what are your thoughts?

M. Hunter: One high priority should be to prevent the "Flip" where a place gets fished to the point that the kelp takes over. The minimum and maximum size is good, culling on bottom is better, and the tray limit gives people more flexibility in their day that they can't keep pounding a spot and but rather focus on quality. Anything we can do that slows fishermen down and go for quality is good. Swipe cards will be good to possibly let guys go on a day that is not bad weather. Anything that focuses on quality and keeping processors working even during February when the quality is not great would be good to have. We don't want to put people in boxes, forcing them to fish in one spot. I think it would be great to manage every ledge appropriate to that ledge, but resource wise, it is not possible. I think we should get rid of the zone boundary as it puts people in boxes. But if a group of fishermen want to work on a project in their area, I think it should be encouraged; it shouldn't come from the state, it should be organic. If the Cobscook Bay Fishermen Association come together and wanted to do something, they should be allowed to.

S. Eddy: So getting rid of the zones you mean people could go where they want but want to keeping the different management measures?

M. Hunter: Yes.

J. Leask: The zones used to be set up for roe.

R. Russell: So, number 8 where it talks about moving management from statute to rulemaking. Has there been a conversation with the Marine Resources Committee (MRC) about this? How willing do you think they would be to do that Trish?

T. Cheney: I think if the FMP points to it, then that would be where the conversation starts. Also Mick Devin on MRC and as a past council member, he could speak to it. A lot of this is in statute because of the history of the fishery.

D. Norris: Number 5 and number 6 and part of number 2 are all the same somewhat. If we separated it out, we could get it down to five. What role can aquaculture play? This Pilot Project is answering that, but it would be clearer if they were in one sentence. Number 2 how many zones and having accurate assessments? This was before the swipe cards and we have a more accurate assessment from the survey now. So we could cross those out.

S. Eddy: But we still have the two zones.

D. Norris: I think it is just a historical artifact.

S. Eddy: But they exist in statute, so it is our role to recommend they go away.

T. Dow: How about you start by recommending moving it to rule from statute?

D. Norris: How are we going to incorporate the larger tote limits in Zone 1 vs Zone 2? We all need to have the same tote limit. Right now they are making the same as we are because of the higher amount they are getting per day even though we have more days. If you run the numbers you will see it is pretty close. So if we are going to incorporating them, do away with the zones, how are we going to do it without hurting the biomass? How will affect things? They have learned to fish differently, they scout on off days. Control of local resource, we had a lot of guys who didn't want to move out of their own harbor and they would beat it to death until their reefs were dead and they are out of the fishery. The vast majority of who is left knows how to fish. You have got to enforce the smalls, and that is why we are doing culling on bottom. It is because marine patrol is too old; they don't want to flip totes.

T. Dow: If they already in tote, what does culling on bottom have to do with it?

J. Leighton: I think it is a waste of time.

T. Dow: The purpose to keep the smaller ones on bottom.

J. Leighton: Draggers bring up the smalls all the time.

M. Hunter: But they drop them back on the beds.

J. Leighton: When you have fifty draggers bringing up rounded tables of smalls, it doesn't matter.

T. Dow: I think a lot of the stuff you have done will take care of it.

J. Leighton: What does local control mean?

J. Leask: Lots of discussion over the years about this. A lot of guys would like to have their area be their own zone. Paul points it out with Cobscook; it is managed a bit differently. If Cobscook came forward and wanted to do something differently, I think it could work.

J. Leighton: I didn't know if it was the towns hiring clam wardens. I think that is a waste of time, they can't write a summons. Give the money to Marine Patrol.

J. Leask: What would you do differently then?

J. Leighton: I would zone it.

T. Dow: For management or exclusive access? When your urchins are gone, you're done and you can go down the coast?

J. Leighton: Yes.

D. Norris: If you guys set up a special Zone for Cutler down to Cobscook, then a lot of the heavy hitters would go down that way.

J. Leighton: It will let the rest of the coast come back.

D. Norris: Bucks Harbor is a dead zone, no simple answers.

J. Leask: Kim what are your thoughts. You are new to this so what is your view. Any ideas?

K. Ovitz: I'll think on it and ill come back to it.

J. Leask: Larry?

L. Harris: Bill and I had very similar ideas. I think smaller zones where you have a real incentive to manage your fishery in a sustainable way to me makes a great deal of sense. If wiped out an area, then those people are out of the fishery and that leaves some licenses to be added. Empty areas can be restored. One has to realize we are not going back to the 1980s when the whole Gulf of Maine went back to urchin production areas. This will limit the number of fishermen that are going to be able to fish in a certain area. I think there is a greater incentive to try things like the Cat Ledges project if you know that there is a buy in of the people in that zone that have an investment in making it work. Cobscook is one example of a place that has urchins, but it becomes a place of rape and pillage when scallop season starts. The idea of every boat making it to Cobscook for the first week of the scallop fishery makes no sense at all. In Chile, it was a series of rape of pillages all the way down the coast. After they removed the economically good urchins, that meant the unviable urchins became the dominant one across the coast, they then awarded sole responsibility to fishing coops all the way down the coast to the southern area. Robert and I were there in 2003 and went on a tour of one of the urchin processing plants. Every single urchin we saw was undersized. Lots of urchins were there in the processing plant, but they were all sublegal because the government wasn't managing it. Interesting because Paul Molynaux went down and gave a report on how well it was being managed, but not necessarily the experience I was having there. In Japan it is local control, fishing communities up and down the coast.

D. Norris: Japan it is supporting communities.

L. Harris: It is very definitely welfare, government subsidies. It keeps the YEN in Japan.

J. Leask: Atchan has brought me up to speed on Chile. They are much more of a farming mechanism. They are using the urchin platter system with great success.

S. Eddy: The Irish bulking system, that company is now out of business.

J. Leask: Huge roe, tangerine slices.

D. Norris: They don't taste good, it gets bad price.

J. Leask: Point is that Chile has local control, each city or family brings urchins in and bulking them up.

D. Norris: Understand that Chile is a low end market. Atchan only does that because he can't get urchins anywhere else. In two of the 24 zones they came up with local control. What they have done there will not work for us here.

L. Harris: They wiped out all their population to the south and then gave control over to local coops. They fish for multispecies, the diversity in that area is off the charts.

D. Norris: They self-destructed.

J. Leask: You can see what they are doing on a daily basis down in Atchan facility. Trish – do you have any thoughts?

T. Cheney: From the resource management point of view I would like to try to marry management of urchins and scallops a bit more as there is a lot of overlap between the participants in the fishery as well as the fishing practices. While I know that you want to increase the biomass, I think increasing the value or bang for the buck is key – culling, tote limits I believe have helped with getting us towards better quality product. I also think we have a supportive commissioner and Carl (Wilson) with some new ideas, so pulling management out of legislation to regulation will be key for us to move forward with any of these new endeavors.

J. Leask: I would like for Carl to come to the next meeting and really start to get involved with this as his input in this is going to be very important. Can we get him to come next time?

T. Cheney: I will see what I can do.

Other Business

D. Norris: Spawning is complicated and you can't legislate when to fish as it might be six weeks late. If you are limited to a little area, then you can't fish because of the season. You could have a mini zone, would like to do it in Petit Manan which used to produce what the entire state would land. If we could bring that area back, it would be amazing. Having mini zones that restrict the quality. We need to have better quality on the market in Japan or we are shooting ourselves in the foot.

R. Russell: If you were going to have a mini zone, then those guys should be able to decide when to harvest, right?

D. Norris: If they are stuck there, they will keep fishing there.

R. Russell: Then they won't have a fishery next year.

D. Norris: We can't lose the quality of the product in Japan.

J. Leask: At the next meeting we can hammer out a lot of these things for the FMP.

S. Eddy: I wonder if we should just pick an item on the list to stay focused, like the zone issue.

J. Leask: Trish could try to retool and consolidate this list.

S. Eddy: We should focus on one topic at a time and move on.

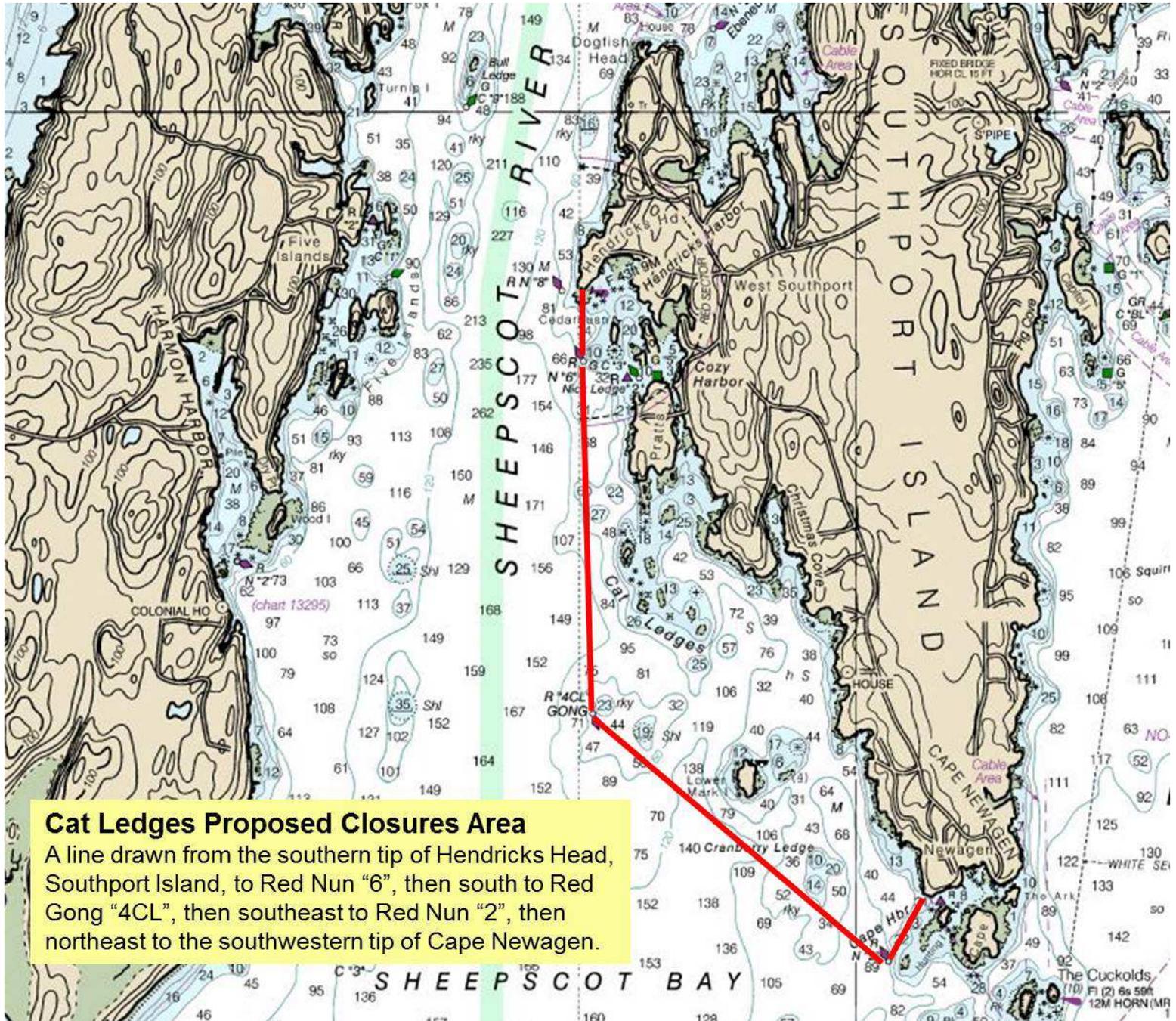
T. Cheney: I can pull together a stand-alone draft of consolidated recommendation for you guys to review at the next meeting.

J. Leask: I would also like to start to talk about the following 2016-17 season as well so we don't feel rushed this time around when we set the season.

Meeting adjourned at 7:24pm.

Appendix A, part 1

Proposed Conservation Closure for the Cat Ledge Pilot Restoration Project



Appendix B

Sea urchin settlement collector sampled collected and preserved from the Cat Ledges Study Site.



Appendix C

2015-16 Season Calendars for Zone 1, Zone 2 and Whiting & Dennys Bays

FINAL 2015 - 2016 Sea Urchin Season for Maine Zone 1

 = Open

 = Closed

Early Season for Divers, Rakers and Trappers

September 2015						
S	M	Tu	W	Th	F	S
		1 O	2 O	3 O	4	5
6	7	8 O	9 O	10 O	11	12
13	14 O	15 O	16	17 O	18 O	19
20	21	22 O	23 O	24 O	25	26
27	28 O	29 O	30			

Late Season for Divers, Rakers and Trappers

December 2015						
S	M	Tu	W	Th	F	S
		1	2 O	3 O	4 O	5
6	7 O	8 O	9	10 O	11 O	12
13	14 O	15 O	16	17 O	18 O	19
20	21 O	22 O	23	24	25	26
27	28	29 O	30 O	31		

Early Season for Draggers

December 2015						
S	M	Tu	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14 O	15 O	16 O	17	18	19
20	21 O	22 O	23 O	24	25	26
27	28 O	29 O	30 O	31		

January 2016						
S	M	Tu	W	Th	F	S
					1	2
3	4 O	5 O	6 O	7	8	9
10	11 O	12 O	13 O	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Late Season for Draggers

February 2016						
S	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8 O	9 O	10	11	12	13
14	15 O	16 O	17	18	19	20
21	22 O	23 O	24	25	26	27
28	29 O					

March 2016						
S	M	Tu	W	Th	F	S
		1 O	2	3 O	4	5
6	7 O	8 O	9	10 O	11	12
13	14 O	15 O	16	17 O	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FINAL 2015 - 2016 Sea Urchin Season for Maine Zone 2

O = Open **□** = Closed

Early Season for Divers, Rakers and Trappers

October 2015							November 2015							December 2015						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
				1	2	3	1	2	3	4	5	6	7			1	2	3	4	5
				O	O			O	O	O						O	O	O		
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
	O	O	O				O	O	O	O				O	O	O	O	O		
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
	O	O	O				O	O	O	O				O	O	O	O	O		
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
	O	O	O				O	O	O					O	O	O	O			
25	26	27	28	29	30	31	29	30						27	28	29	30	31		
	O	O	O				O							O	O	O				

Late Season for Divers, Rakers and Trappers

December 2015							January 2016							February 2016							March 2016						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
		1	2	3	4	5					1	2		1	2	3	4	5	6			1	2	3	4	5	
		O	O	O	O						O	O		O	O							O	O				
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13	6	7	8	9	10	11	12
	O	O	O				O	O	O	O				O	O	O	O				O	O	O	O			
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	13	14	15	16	17	18	19
	O	O	O	O			O	O	O	O				O	O	O	O				O	O	O	O			
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	20	21	22	23	24	25	26
	O	O	O				O	O	O	O				O	O	O					O	O	O	O			
27	28	29	30	31			24	25	26	27	28	29	30	28	29						27	28	29	30	31		
	O	O					O	O	O	O				O							O						
							31																				

Early Season for Druggers

October 2015							November 2015							December 2015							February 2016							March 2016							
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	
			1	2	3		1	2	3	4	5	6	7			1	2	3	4	5			1	2	3	4	5	6			1	2	3	4	5
			O	O						O	O					O	O						O	O							O	O			
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	7	8	9	10	11	12	13	6	7	8	9	10	11	12	
		O	O	O			O	O	O	O				O	O	O	O	O			O	O	O	O	O			O	O	O	O	O			
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	14	15	16	17	18	19	20	13	14	15	16	17	18	19	
		O	O	O			O	O	O	O				O	O	O	O	O			O	O	O	O	O			O	O	O	O	O			
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	21	22	23	24	25	26	27	20	21	22	23	24	25	26	
		O	O				O	O	O	O				O	O	O	O	O			O	O	O	O	O			O	O	O	O	O			
25	26	27	28	29	30	31	29	30						27	28	29	30	31			28	29						27	28	29	30	31			
		O	O				O							O	O	O	O			O							O								

Late Season for Druggers

December 2015							January 2016							February 2016							March 2016						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
		1	2	3	4	5					1	2		1	2	3	4	5	6			1	2	3	4	5	
		O	O	O	O						O	O		O	O							O	O				
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13	6	7	8	9	10	11	12
	O	O	O				O	O	O	O				O	O	O	O				O	O	O	O			
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	13	14	15	16	17	18	19
	O	O	O	O			O	O	O	O				O	O	O	O				O	O	O	O			
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	20	21	22	23	24	25	26
	O	O	O				O	O	O	O				O	O	O					O	O	O	O			
27	28	29	30	31			24	25	26	27	28	29	30	28	29						27	28	29	30	31		
	O	O					O	O	O	O				O							O						
							31																				

FINAL 2015 - 2016 Sea Urchin Season for Maine Zone 2 Whiting and Denny's Bay Limited Access Area

O = Open = Closed

Early Season for Divers, Rakers and Trappers

October 2015							November 2015							December 2015						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
				1	2	3	1	2 O	3	4	5	6	7			1	2	3	4	5
4	5	6	7	8	9	10	8	9 O	10	11	12	13	14	6	7 O	8	9	10	11	12
11	12	13	14	15	16	17	15	16 O	17	18	19	20	21	13	14 O	15 O	16	17	18	19
18	19	20	21	22	23	24	22	23 O	24	25	26	27	28	20	21 O	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28 O	29	30	31		

Late Season for Divers, Rakers and Trappers

December 2015							January 2016							February 2016							March 2016						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
		1	2	3	4	5						1	2		1	2	3	4	5	6			1 O	2	3	4	5
6	7 O	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13	6	7	8 O	9	10	11	12
13	14 O	15 O	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	13	14	15 O	16	17	18	19
20	21 O	22 O	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	20	21	22	23	24	25	26
27	28 O	29	30	31			24	25	26	27	28	29	30	28	29						27	28	29	30	31		
							31																				

Early Season for Draggers

October 2015							November 2015							December 2015							February 2016							March 2016						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
				1	2	3	1	2	3	4	5	6	7			1	2 O	3 O	4	5		1	2	3	4	5	6			1	2 O	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9 O	10 O	11	12	7	8	9	10	11	12	13	6	7	8	9 O	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16 O	17 O	18	19	14	15	16	17	18	19	20	13	14	15	16 O	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	21	22	23	24	25	26	27	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31			28	29						27	28	29	30	31		

Late Season for Draggers

December 2015							January 2016							February 2016							March 2016						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
		1	2	3	4	5						1	2		1	2	3	4	5	6			1	2 O	3	4	5
6	7	8 O	9 O	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13	6	7	8	9 O	10	11	12
13	14	15	16 O	17 O	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	13	14	15	16 O	17	18	19
20	21	22	23 O	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	20	21	22	23	24	25	26
27	28	29 O	30	31			24	25	26	27	28	29	30	28	29						27	28	29	30	31		
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